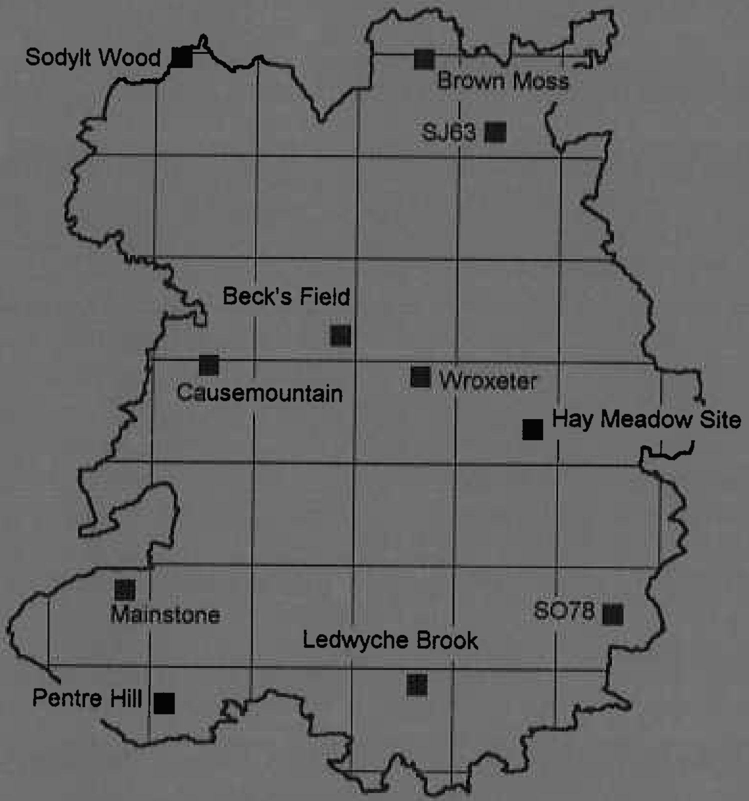
Shropshire Flora Group Newsletter Spring 1996



1996 Field trips - see p16 for details

Recording for the BSBI Atlas 2000

Notes on species to look for in Shropshire

The Flora of Montgomeryshire

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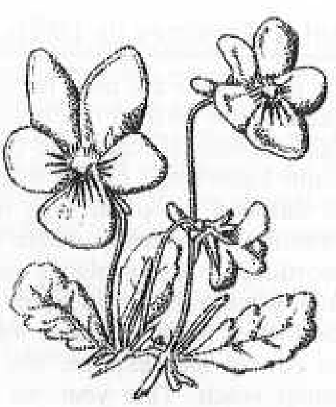


Viola lutea - Yellow Mountain Pansy

Report on the Annual Meeting

There was an interesting debate on the work of the Flora Group at the meeting at Preston Montford Field Centre in December. It is clearly important that we plan our activities well, making sure that the work of the group is both enjoyable and worthwhile. The main issues raised were how exactly to collect information in the most effective and efficient way, and how to ensure that our coverage of the county remains systematic and thorough. These are not, of course, new issues - but the computer is changing things, and we have to respond to those changes.

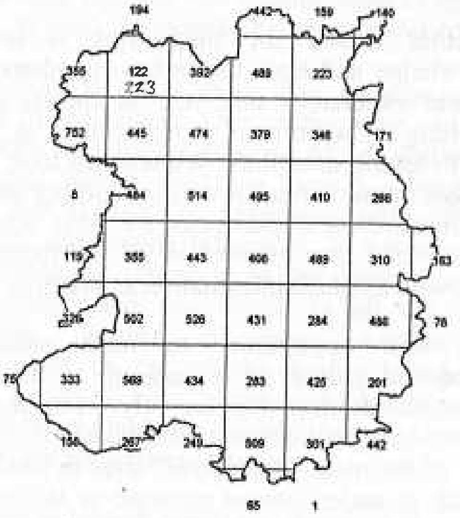
It was agreed that we would accept records in a variety of ways. Some recorders are happy to stick to the tetrad system, keeping tabs on the species in their 100 square kilometres of territory and sending in a summary of the results, on M cards. This is absolutely fine: much of the work of the Flora Group is about producing grid-based maps, particularly for the forthcoming BSBI Atlas of the Flora of the British Isles, and this is the most effective way to get the data together.

On the other hand, there is a tendency now for more site monitoring and, so long as certain rules are followed, this is even more valuable (albeit more work) than tetrad recording. So the message is: record whichever way you prefer. We have produced a booklet describing how we would like records to be presented, and you can request a copy from Sarah.

There is a need to survey the county systematically. Ideally we would like this to be on a 1km basis, but tetrads are more manageable (only 1,000-odd as opposed to at least 3,500) but the first priority must be to ensure that all the hectads (10km squares) are covered in the post-Flora period (since 1985). There are some 52 hectads wholly or partially in Shropshire, and we should be able to record adequately in all of these this year, so that the information can be sent to the BSBI for the forthcoming atlas.

As the map below shows, this has not yet been done for many of them, especially the ones around the fringes. So please would everyone try to make time this year for recording in at least one under-recorded hectad. The best way to do this is to fill in a BRC card for some small site within the chosen area: just a churchyard, wood or stream will do fine. The main gap in our knowledge is often actually the commoner species, which were not recorded for the Flora.

Finally, if any of the hectad coordinators would like an analysis of their square - a list of species not recorded since 1985, for example, please get in touch.



Above: The number of species of higher plant recorded in each hectad in Shropshire since 1985. It should be possible to find at least 300 species in the wild in all but the smallest fragments of a square: recording should be focused on those areas which are currently under-recorded.

Field Meetings in 1996

For those who are new to the Flora Group, we hold a series of field meetings each summer. The main purpose of these is to collect records to add to our knowledge of the distribution of species. To this end we often visit the less well-known corners of the county where there is a dearth of recording. In these places we tend to split into small groups and try to cover as much territory as possible. It is an excellent way to find out about the county and explore the parts other groups cannot reach. This year we have visits to two tetrads in SJ63 (July 3rd) from which we have no records at all. Everything you see will be a new "dot" for the Flora: if you want to be immortalised through your records, here's your chance! For the last time, too - we will have surveyed every tetrad after that. There is also a visit planned to the region of the Ledwyche Brook in SO57 (September 28th), which is a rather neglected spot, botanically speaking. A visit to SO78 is yet to be arranged but is scheduled for September 4th.

The second purpose of the meetings is to have a good time, and so we have arranged one in a pub. Actually there is slightly more to it than that, and we are going to have a quick look at Beck's Field below Shrewsbury School, opposite the Quarry in Shrewsbury, first (April 23rd). There are meadow saxifrages in this field and probably a lot more besides. The adventurous can sling a grapple into the river and see which water crowfoots they find.

Another reason for field trips is to share knowledge and train the newer members. None of our excursions this year is specifically for teaching a taxonomic group, but it is always worth asking questions. We want to look out for sedges in particular, as we are working on a new publication on *Cyperaceae* for next winter; so please take care to send in all the records you can, with as much information as possible.

The best opportunity to learn weird and wonderful species is to turn up to the Brown Moss monitoring day on July 21st: the Flora Group have traditionally been involved with this, one of the most "biodiverse" sites in Shropshire, which is under intense pressure at the moment. There is an invasion by *Crassula helmsii* - New Zealand Pigmyweed or Australian Swamp Stonecrop, call it what you will - a pernicious alien weed of ponds which threatens to dominate anywhere in which it becomes established. Some will have seen the publicity for this on the TV and the papers. One report told of this "insidious weed that smothers other plants, depriving them of oxygen". According to the Daily Mail Shropshire's botanists have christened it "The Creeping Death" which just shows you how melodramatic a bunch we are...

In addition to that, the heathland at Brown Moss has largely disappeared under birch woods in the thirty-odd years since grazing ceased, and the pools (thirteen of them) are drying up. Shropshire County Council is endeavouring to counter these threats, and we have offered to survey for the many difficult and uncommon species that are to be found there. We already have species lists from 27 of the last 30 years, giving us an exceptional opportunity to monitor the changes.

There are three other sites to be surveyed this year: English Heritage have invited us to have a look at Wroxeter Roman City on June 22nd, after our most enjoyable survey of Haughmond Abbey last year. We are delighted to be able to exchange records with EH, as they are the owners of some of the most interesting sites in the county, including Old Oswestry Earthworks and Clun Castle mound.

The Woodland Trust have also said that we can visit their reserves, of which there are ten in the county to date. We have asked to survey two small woodlands in the north, near Sodylt Bank, north-west of Ellesmere (May 19th). These are steep ancient woodlands in valleys by the River Dee, and include what is thought to be the most northerly site in Britain for *Epipactis purpurata* (Violet Helleborine). Unfortunately our visit is too early in the year to see this species in flower, but Spring is the best time for most of the woodland flowers and we may be able to return later in the summer.

Tina Teearu is leading an expedition to the Mainstone area (SO28, May 11th) to record in the tetrads around there; and there is a trip planned to Pentre Hill near Clun in the Spring (May 5th) to look for ephemeral species. Pat Parker is also leading a walk in the Causemountain area (SJ30) on July 11th.

The magical mystery tour this year is to a hay meadow site for which we are seeking permission, which explains why its location is not advertised. It should suffice to say that the meadow in question represents the very last example in the county of a rare vegetation community.

For those who would like some more formal training, Sarah Whild, who is an academic advisor for Birmingham University, is running a number of courses involving botanical subjects which are also listed on page 16.

Herbaria

A small group gathered in Ludlow in February in freezing weather to discuss the use of herbaria in Shropshire, both historically and in the future. A herbarium is essentially a collection of pressed plants, although you have to use acid-free paper, special glue, and some other tricks of the museum trade if you want it to last very long. There are a number of collections in the county, at museums in Shrewsbury, Much Wenlock, Bishops Castle and Ludlow, and a fair number of specimens from this county are stored in other locations, particularly Cambridge University, the British Museum, Kew and Edinburgh. All of these collections are predominantly over 100 years old, and it seems like a good idea to collect some new material.

The advantage of collecting "voucher specimens" - a piece of a plant, preserved and stored in a herbarium - is that they can help to validate a record. Pondweeds are an example: new records for narrow-leaved pondweeds (*Potamogeton pusillus* and *P. berchtoldii*) are not accepted without supporting evidence. Preserved specimens can be identified at a later date, and this has happened in the case of *Potamogeton* x *zizii*, which has recently been determined from a museum specimen collected in this county in the 19th century, and is therefore a first county record - albeit probably extinct already!

We would like to start a modest collection of new material for a modern herbarium of the county. This will be based at Ludlow Museum or - for specimens collected in Shrewsbury - Rowleys House Museum. It is important to bear in mind the damage that can be done by collecting plant material in the wild, and that it is an offence to uproot any wild plant without the permission of the landowner. Nevertheless, there is scope for taking limited quantities of plant material of certain groups, notably the critical taxa of *Hieracium*, *Taraxacum*, *Euphrasia*, *Rosa*, *Ulmus* & *Rubus*, as well as difficult groups such as fine-leaved *Potamogetons*, aquatic *Ranunculus* species and some sedges and grasses.

Sarah Whild and Pat Parker have agreed to press and mount any specimens collected. Please let them know if you have any material for preservation, and follow the guidelines issued. Do not be tempted to "do it yourself", unless you are familiar with the procedures used, as this can result in useless specimens. The Flora Group does need to have specimens to back up its records, so do bear this in mind while out recording. We may also contact some recorders to see if they can collect a voucher for records already submitted. It is worth mentioning that any voucher specimen is useless without full details of its original location, and these should be written on a label attached with string. An R card should also be completed, giving details of the collection in which the voucher is to be stored.

For further information, please contact Sarah (01743 343789) or Pat (no 'phone - the address is Avon House, Weston Lullingfields).

The Flora of Montgomeryshire

Ian Trueman, Alan Morton & Marjorie Wainwright. 1995. The Montgomeryshire Field Society and Montgomeryshire Wildlife Trust. Hardback: 244 pp £18 + p&p. ISBN 0 9526715 0 6.

Having been in preparation for as long as anyone can remember, the Flora of Montgomeryshire is now in print, and it is a stunning work. The format is essentially the same as that of the Shropshire Flora - a division of the plants into A, B and C groups, depending on their rarity, and the presentation of that data in tetrad distribution maps. The authors, with 25 years of survey work at their disposal, and a fully computerised database, were amazingly thorough in their work and present their information in the most open and clear way. The experimental feel of the Shropshire Flora is gone: there are no inscrutable tables of data; no indecipherable lists of pH values or cryptic references to earlier works. Everything that you will actually want to know is there, in plain language (English and Welsh!).

This Flora is much more than an atlas of the plants of the county. One of the most welcome additions is the inclusion of a full-colour Ordnance Survey map, but there is a wealth of other data as well - on vegetation, soils, climate, geology and human influences. It amounts to a comprehensive statement on the environment of the county, and one which is all the more welcome because it comes without the intervention of the official bodies which one might expect to have produced such a report. It should be compulsory reading for all planners, developers and conservationists.

The technological advances represented in the Flora include satellite photographs and computer-generated land cover maps. It is illustrated throughout with paintings and drawings which range from excellent to amateurish. The only thing I did not like about it was the dust cover, which is easily discarded. At £18 plus postage it is an essential work of reference.

Historical Data

The Flora Group would like to make an appeal for historical records and information. There is often a priority given to the most recent data, but this is a misunderstanding of the requirements of ecologists and the power of computers. We have now almost finished computerising the recent Flora records, and it is no problem to keep up with new information each year. You can liken a computer to an infinitely large library with almost instant retrieval facilities: there is effectively no limit on what it can store.

For that reason, we are casting our eyes further afield to historical records and other sources of information. There is a lot of accumulated wisdom amongst the members of the Group: old field notebooks, publications, research papers, even just memories of sites that have been destroyed. Quite often we have to invent vague "historical sites" on the computer to allocate records to, until someone comes forward with a likely location for them. Where, for example, are Cound Moor, Lyd Hole, Twyford Vownog, Sutton Spa, Malthouse Pool, Wenlock Abbey, Heywood, Lilleshall Mill, Old Brook Wood, Sandford Pool, Wrekin Bog, Dolgoch Bog, Marn Wood, Alkmond Park Moss and Golden Pool?

Of course we can make guesses at the location of most of these, but what exactly are the details?

There are two ways in which members can help: firstly, we would appreciate any old papers or publications that you may have stored away. We will commit ourselves to finding a safe storage place for anything we receive, or of simply computerising the data and letting you have it back. As always, we make a firm offer of keeping anything confidential if you want, and we will let you have your own information back in any format you choose.

Secondly, we would be grateful for any offers of research - for example, into the places listed above. We don't just keep species lists for sites: full information about the history, uses and changes in a site make it far easier to understand them. We have a lot of information about the origins, uses and decline of the canal system, but very little about the railways, for instance. There is even room for information about the life and work of recorders and, if I may be so morbid, a published obituary is a very valuable source of information...

So please sort out those old files and bookshelves and get in touch. We were thrilled recently when a neighbour gave us a complete set of old definitive footpath maps of the county. She told us to make good use of them, and I hope we shall. If anyone else has items of interest lying about or stored away safely, we would be very pleased to hear from you.

Please contact Alex or Sarah - address on the back cover.

Certificate in Natural Environment

Birmingham University is organising a part-time course in Shrewsbury leading to a *Certificate of Higher Education in the Natural Environment.* It is a course aimed at keen amateur naturalists and professionals working in associated fields.

There are eight modules over two years, consisting of evening meetings and day schools, including some weekends. Subjects covered include:

- ☐ Exploring Ecology
- ☐ Botanical Essentials
- ☐ The Countryside Today
- ☐ Habitat Creation
- ☐ Managing the Environment
- ☐ Meres and Mosses
- ☐ Bugs, Birds and Badgers

There is also a Personal Investigative Project of independent study during the second year.

The course is based at The Gateway in Shrewsbury and run by the University of Birmingham School of Continuing Studies. The annual fee is £380, which may be paid in instalments. Sarah Whild is the course organiser and Chris Walker is among the lecturers.

For further details, contact:
The Admissions Office
Faculty of Education and Continuing Studies
Division of the Academic Secretary's Office
The University of Birmingham
Edgbaston
Birmingham
B15 2TT

Tel: 0121 414 4887
Fax: 0121 414 4865
Email: A.Hall@bham.ac.uk

Species Notes for the 1996 Season

Ian Trueman & Sarah Whild

Thanks to all your efforts the records continue to roll in; these notes are a response to the record as a whole, and particularly to the contrast between Flora records and the post-Flora records. I hope that the points raised will help some of you. I have assumed that you all have Clive Stace's wonderful new Flora; other works which I myself cannot do without are the BSBI text on Sedges, Hubbard's Penguin on Grasses, and the magic book on Difficult Plant Groups that Wigginton and Graham produced originally for the Durham Flora and later for NCC.

The BSBI Handbooks are also useful to own. Finally Haslam, Sinker and Wolseley's book on British Water Plants (Field Studies Council) is very useful.

My notes may help you to sort out groups of closely related species *in Shropshire*, but you must understand that this has been achieved by omitting species *unlikely* to occur here, so my notes may not work elsewhere, and may just cause you to miss a first county record!

You will observe that I have (reluctantly) adopted the ugly word "hectad" to mean a 10 km square.

Agrostis canina Velvet Bent &
A. *vinealis* Brown Bent

Currently we only have a very qualitative idea about the distributions of these species, which have until recently been treated as subspecies of *A. canina*. Most of the recent records are for *A. canina*, which may well be correct but may also be because recorders are still treating the two species as one. Both are usually quite easy to pick out from *A. capillaris* when in flower or fruit because the slighter, narrower inflorescences are nearly always made up of **awned** flowers (hand-lens).

A. vinealis is found in dry acid grassland, particularly in heathy and moorland areas. It grows with, and is like *A. capillaris*, having underground stems or rhizomes, and quite a short ligule. Unlike in *A. capillaris* however the ligule is usually longer than wide and pointed, and the inflorescence becomes strongly contracted in fruit.

A. canina is a lowland plant, typically found in damp or wet places, especially around ponds and in marshes. It strongly resembles *A. stolonifera*, the Creeping Bent, in having creeping, above-ground, leafy stolons instead of rhizomes.

Agrostis gigantea Black Bent

At last a few records of this are starting to come in. It splits the characters of *capillaris* and *stolonifera*, and should be looked for in disturbed ground, arable fields and rough grassy places. It is, as the name suggests, usually quite large, although both *capillaris* and *stolonifera* have large varieties and can grow in the same habitats. *Gigantea* is like *stolonifera* in having a ligule longer than wide and an inflorescence that closes up in fruit, but like *capillaris* is has no stolons and instead has underground rhizomes which are stronger than those of *capillaris* and almost resemble those of the dreaded Common Couch grass, which we must learn to call *Elytrigia repens*.

Alchemilla filicaulis Ladies-mantle

It used to be easy to remember this Ladies-mantle when it was called *vestita*, since its leaves are hairy both sides like a vest! This distinguishes *filicaulis* from *glabra*, with the leaf glabrous both sides, and *xanthochlora*, with the leaf glabrous above and hairy below.

There is also the alien *mollis*, which sometimes gets out of gardens, and can be distinguished because the five true sepals alternate with five members of the "epicalyx" and all are about the same size.

The epicalyx segments, though present, are much shorter than the sepals in the native *Alchemillas*. *Filicaulis, glabra* and *xanthochlora* are probably all we have as natives in Shropshire and should be distinguished from one another and not lumped as *A. vulgaris* agg.

Now however one of our most experienced recorders has come up with the rather more western and upland subspecies of *A. filicaulis*, ssp. *filicaulis*, which differs from the commoner *filicaulis* ssp. *vestita* in not being quite so hairy on the upper surface of the leaf. More to the point the upper part of the stem and the whole inflorescence except the flowers themselves are hairless in ssp. *filicaulis*; in ssp. *vestita* the stem and inflorescence is hairy throughout. Please check these characters if you come across *Alchemilla filicaulis* in upland situations.

Alisma lanceolatum
Narrow-leaved Water-plantain

Why this should be so rare in Shropshire is hard to explain and it should be looked for carefully, especially in the east. The leaf blade narrows gradually into the petiole at the base instead of there being a rounded or almost cordate leaf base as in *A. plantago-aquatica*, Water-plantain. The anthers are only as long as wide instead of being twice as long as wide as in the commoner species. The two species are also distinguishable in fruit. In *lanceolatum* the style arises from the upper part of each fruit, in *plantago-aquatica* the style arises about half way down the fruit.

The two species often grow together; *lanceolatum* flowers open in the morning from 9 am until 2 pm and *plantago-aquatica* flowers open from 1 to 7pm. In the Wolverhampton canals *lanceolatum* seems to flower and fruit rather later in the summer than *plantago-aquatica.*

Alopecurus aequalis Orange Foxtail

The only recent records of this are from Brown Moss; there were quite a few more in the Flora. Look for it where the water margin has receded in shallow ponds and lakes. Do not forget that *A. geniculatus* the Marsh Foxtail can also have orange anthers like *aequalis*, but if you bend the inflorescence you can generally easily see awns in *geniculatus*, awns are absent or invisible in *aequalis*, which also often has a whitish, waxy look to the shoots.

Anacamptis pyramidalis Pyramidal Orchid

There are very few recent records for Pyramidal Orchid: could you all update any you know still exist.

Aphanes arvensis agg. Parsley-piert

We have two Parsley-pierts: *arvensis* sensu stricto and what used to be called *microcarpa* and now has to be called *inexpectata*. They are not too difficult to identify when fruiting: see Stace for the characters, and if you are stumped send a bit to me or Sarah!

Aster species

There are several Michaelmas-daisies commonly escaping in Shropshire - check any you come across against the key characters in Stace.

Athyrium filix-femina Lady-fern

Only recorded from 31 hectads - probably under-recorded?

Soft-bromes

Always check out Soft-bromes in field margins and meadows: the common Soft-brome *Bromus hordeaceus* has distinctly hairy spikelets; anything with hairless spikelets needs careful examination.

Of the ones with hairless spikelets the Lesser Soft-brome, *Bromus* x *pseudothominei* is quite common as an introduction, and is otherwise very much like *B. hordeaceus* but with smaller spikelets. It has anthers about 1mm long.

Bromus commutatus, the Meadow Brome, which also generally has hairless spikelets, has only been recorded recently once or twice: it and other annual bromes may well be more abundant. *B. commutatus* and the similar *B. racemosus*, the Smooth Brome, have more open panicles than *B. hordeaceus* with at least some long- stalked spikelets, and the anthers are more than 1mm long, but the differences are subtle and I will look at specimens of two or three spikelets, preferably with intact stamens, if you are not sure.

Callitriche spp. Water-starworts

We have very few records of any of these apart from *C. stagnalis*, and even this seems under-recorded. Stace has produced some promising-looking new keys and drawings for identifying the species, but you will need fruits, which occur in the angles between leaves and stems, since leaf shape can be very variable. Even plants growing in semi-terrestrial situations on wet mud can belong to several species and not just *stagnalis*. You will also need a good lens! By all means send in any fruiting material, fresh in a polythene bag (but check the recipient is not away from home!).

Calystegia sepium Hedge Bindweed

People are not distinguishing the species *C. sepium, silvatica* and *pulchra* - probably because they used to be subspecies.

C. sepium has the two bracteoles behind the flower not overlapping.

C. silvatica, the Large Bindweed, has larger flowers with overlapping bracteoles.

C. pulchra, the Hairy Bindweed, is a sparsely hairy species with pink and white striped flowers.

If you record *C. sepium*, make it clear whether you mean the first of these three species or whether you have a non-flowering plant which could be either *sepium* or *silvatica.*

Sedges

Hopefully we will soon have a new sedge key; in the meantime I will supply the adventurous with a punch-card key to the sedges if asked. Several species do however look under-recorded:

***Carex acuta*, Slender Tufted-sedge** is quite a large reed-swamp species which I have seen up and down the Severn. It is very like *Carex acutiformis*, the Lesser Pond-sedge, but each female flower has TWO stigmas not three. Always check! I have been caught out several times! Also the female glume behind each utricle is minutely toothed near the tip in *C. acutiformis*, and not in *C. acuta*.

***Carex binervis*, Green-ribbed Sedge** is a medium-sized sedge which is frequent in moorland and heath, usually in the transition between wet and dry situations. Usually there is a loose mat of shoots, dead parts being reddish or orangy-brown, and when flowering the terminal male spike is relatively large compared with the female spikes, which are made up of utricles and glumes which are all usually purplish-brown.

***Carex spicata*, Spiked Sedge** strongly resembles the commoner Prickly Sedge, *C. muricata*, which you will find in grassy, often quite dry situations such as road verges and even quite disturbed situations. *Spicata* occurs in less disturbed habitats, usually on heavier, moister soils. It is usually larger then *muricata* in all its parts, but the ligule is much more acute and twice as long as wide (blunt and about as long as wide in *muricata*). *Spicata* also has a distinct bulbous, corky base to the utricle not seen in *muricata*, and there is usually a wine-red pigmentation to the plant absent from other members of the *muricata* group. *Spicata* resembles the False Fox Sedge *C. otrubae* more than other members of the *muricata* group, but in *otrubae* the leaves are broader and many more of the bracts associated with the inflorescence have long hair-like points.

***Carex strigosa*, Thin-spiked Wood-sedge** I suspect is commoner in old woodlands than the records suggest. It is a similar sedge to *Carex sylvatica*, the Wood-sedge, but the older leaves are much wider, and (the key character) the utricle is blunt and lacks the extremely drawn out beak of *sylvatica*. *Strigosa* always grows in wetter places than *sylvatica*, particularly in woodland flushes and stream sides. Charles Sinker also says that it is a characteristic member of the ground flora along tracks in ancient woodland on heavy base-rich soils. Always look for the blunt utricle.

***Cerastium arvense* Field Mouse-ear**

This is now recently recorded from 10 hectads. this seems a lot to me, and more than in the Flora. I note that one record on the computer is from a list which I made and is definitely an error (doubtless mine) for *glomeratum* - don't forget to check your records after they have gone onto the machine!

***Chrysanthemum segetum* Corn Marigold**

This seems to have collapsed from about 30 hectads to five since the Flora! This may well be true, and a sad fate for a beautiful weed, but look out for it in slightly acid arable land, especially in potato crops.

***Clinopodium vulgare* Wild Basil**

Another, even more mysterious apparent collapse in distribution, and should be quite widespread in dry, base-rich, open grassland and rocky places such as limestone, railway lines, even road banks.

Dactylorhiza

Please record all Common Spotted-orchids as *D. fuchsii* not *D. fuchsii* ssp. *fuchsii*, and all Heath Spotted-orchids as *D. maculata* not *D. maculata* ssp. *ericetorum*. Note however that hybrids may occur.

The Early and Northern Marsh-orchids are rarer than the Southern Marsh-orchid and all these are pretty difficult to distinguish. If in doubt there are BSBI referees: they WILL attempt to identify from GOOD photographs which should include in-focus close-ups of flowers and which may be sent via me if necessary.

***Elodea* spp. Waterweeds**

There seem to be very few records as yet for Nuttall's Waterweed *E. nuttallii*. This differs from Canadian Waterweed in having longer, narrower and more pointed leaves: Stace gives a measurement which should be made 0.5 mm behind the apex:

leaf 0.2-0.7(-0.8) mm wide .... *E. nuttallii*
leaf (0.7-)0.8-2.3mm wide .... *E. canadensis*

***Euphrasia* spp. Eyebrights**

These will continue to be a problem, not least because a definite identification requires the examination of several individuals from a population. Also hybrids are alleged to be frequent. BSBI does now at last have a referee, but your sample would have to be gathered and pressed, which really requires the landowner's permission and is scarcely very conservation-minded. On the other hand to be definite there is a need to be able to substantiate a record with at least a single specimen.

In identification **nodes** are counted from the base, excluding the cotyledon node. Measure **internode length** on the main stem. **Corolla length** is measured from the base of the corolla tube to the tip of the upper lip.

A clear diagnostic feature of two species which are relatively uncommon in Shropshire - *E. anglica* and *E. rostkoviana* - is the presence of long-stalked glandular hairs on the middle stem leaves. There may rarely be glands on other species but the stalks will not be 10x as long as the head as in the above species.

E. anglica is recorded from a variety of (sometimes damp) habitats. It is usually tall - to 20cm - , with flexuous (i.e. wavy) stems, usually with a few similar branches, and with medium to small flowers, corolla less than 7mm long.

E. rostkoviana has larger flowers, corolla (6.5-)8-12.5mm, and stouter, more erect stems. Most of the (few, old) records are *E. rostkoviana* ssp. *rostkoviana*, which is usually found in damp places.

The remaining species lack the long-stalked glandular hairs of *E. anglica* and *E. rostkoviana.* One relatively uncommon species, *E. arctica* ssp. *borealis*, does however often have relatively short- stalked glandular hairs.

E. arctica ssp. *borealis* has the stem erect with a few erect or ascending branches. The stem internodes are short, typically 2-4 times as long as the leaves and the flowers start low on the stem, at node 8 or lower. The flower is medium-sized, 6-9(-10)mm. It is recorded from hay-meadows and lead mine spoil tips.

E. nemorosa is probably the commonest Shropshire species, especially in the lowlands, on heaths, pastures, roadsides and especially on limestone. There is an erect stem, with a variable number of ascending branches. The stem internodes are much longer than the leaves - typically 3 or 4 times as long. The middle and upper leaves lack glandular hairs, though they may have long whitish hairs on both sides. Flowers typically start at node 9 or higher, and are medium sized: 5-7.5(-8.5)mm. The lowest floral bracts are mostly in opposite pairs.

E. confusa is a similar eglandular plant but is a more upland, moorland species. Unlike *nemorosa* and *arctica* in *confusa* the stem is flexuous, usually with several flexuous branches which may be procumbent at the base. Stem internodes are short - rarely 2.5 times as long as the leaves - the flowers start low down the stem at node 8 or lower, the bracts are more often alternate than in *nemorosa* and the flower is 5-9mm long.

The characters could be expressed in a key:

1. Long-stalked glandular hairs present on the middle stem leaves, the stalks of the glandular hairs 10x as long as the head 2
1. Long-stalked glandular hairs absent, although shorter-stalked ones are possible 3

2. Flowers medium to small, less than 7mm long; plant with flexuous stems .... *E. anglica*

2. Flowers large, (6.5-)8-12.mm, stems erect .... *E. rostkoviana*

3. Stem erect, internodes 2-4 x as long as leaves, flowers start at node 8 or lower .... *E. arctica* ssp. *borealis*

3. Stem erect, internodes 3-4 x as long as leaves, flowers start at node 9 or higher .... *E. nemorosa*

3. Stem flexuous, internodes up to 2 x length of leaves, flowers start at node 8 or lower .... *E. confusa*

Check any identifications from this or any other key against descriptions in Stace or CTW.

These are the most likely species to occur in Shropshire, but others may be found, so please only use the above as a guide. Hybrids are said to be common, especially *nemorosa* x *confusa* and *nemorosa* x *anglica.*

***Festuca ovina* Sheep's-fescue**

This species seems under-recorded. It is finer-leaved than *F. rubra* and lacks rhizomes, but these are also absent from the common lawn grass *F. rubra* ssp. *commutata*, Chewing's Fescue. The only difference between *rubra* and *ovina* I have found reliable is that in *rubra* the leaf sheath is a complete tube, although it may eventually split above, whilst in *ovina* the leaf sheath is split from top to bottom from the first, with the two margins overlapping. This is of course only visible with a clean, well wielded hand-lens!

F. ovina is common, especially on well-drained, usually acid soils, and particularly, but certainly not exclusively, in the uplands.

***F. filiformis*, Fine-leaved Sheep's-fescue**

Look out for this, (it used to be *F. ovina* ssp. *tenuifolia*) which does have distinctly finer leaves than typical *F. ovina.*

Stace says that in *F. filiformis* the leaves are "0.3-0.53mm from midrib to edge," for *F. ovina* he gives "0.4-0.7mm from midrib to edge".

Rather less critically, *F. filiformis* has smaller flowers and practically no awns. *Filiformis* is predominantly a heath land plant, often growing with Heather and Wavy Hair-grass; if you suspect you have it, check the flower and leaf measurements in Stace, and press a few leafy flowering shoots and send to me if still unsure.

Fumaria spp. Fumitories

Fumaria officinalis, Common Fumitory, is usually identifiable from the relatively small corollas, mostly 8mm long, and the fruit flat-topped or even slightly hollowed out at the apex.

In contrast *F. muralis* ssp. *boraei*, the Common Ramping-fumitory and *F. bastardii*, the Tall Ramping-fumitory both have corolla 9-12mm, and fruit rounded above.

F. bastardii may be separated from *F. muralis* ssp. *boraei* because the latter has large sepals 3-5 x 2-3mm, a dark tip to the upper petal and fruit with a distinct "neck" at the base. In *F. bastardii* the sepal is about 3 x 1mm, there is rarely a dark tip to the upper petal, and no distinct "neck" to the base of the fruit.

Galeopsis bifida Bifid Hemp-nettle

There are very few records for this which may in fact be as common as *G. tetrahit*. These two are easily distinguished in flower from the shape of the terminal lobe of the lower lip of the corolla. This is flat and rounded or very slightly notched in *tetrahit*, and clearly notched and convex, with the edges curled under, in *bifida*.

Geranium pratense Meadow Crane's-bill

Some of these records, especially many roadside populations near houses, may be the sterile hybrid *G.* x *magnificum*, Purple Crane's-bill, an escape from cultivation. The petals are conspicuously notched in x *magnificum*; they are rounded in *G. pratense*.

Geum x *intermedium* "Hybrid" Avens

People are not recording the hybrid between *G. rivale*, Water Avens and *G. urbanum*, the Wood Avens. These two species are completely inter-fertile and you should expect every grade of intermediate where they come together. Hybrids often have rather striking orange-coloured flowers.

Gymnadenia conopsea Fragrant Orchid

There are 3 subspecies, all of which have been recorded in Shropshire:
Subspecies *conopsea* smells of carnations and is found on dry limestone pasture;
Ssp. *densiflora* smells strongly of cloves and grows in wet, base-rich pastures and fens;
Ssp. *borealis* is sometimes found in less base-rich conditions.
The key in Stace uses the size of flowers and degree of lobing on the labellum to separate these three: this should be followed.

Hieracium Hawkweeds

These are truly difficult and experts tend not to accept the records of us lowly generalists! There is a very simple treatment in Stace which may enable you to get them to the "Section" fairly well, but often the best approach is to make a 6-fig. grid reference for all populations to make it easy for visiting experts to sample the diversity.

Juncus bufonius, Toad Rush & *J. foliosus*, Leafy Rush

The Leafy Rush may well grow in Shropshire, it is certainly present in the east of Montgomeryshire. It differs from the Toad Rush in being a more erect plant with wider leaves. The green petals and sepals in *foliosus* usually have a dark line running either side of the midrib, and the anthers are longer than their filaments. (They are shorter than, or equal in length to the filaments in *bufonius*). The seeds in *foliosus* have characteristic minute longitudinal ridges (x20 lens), and a voucher of fruit with seeds should be taken. The habitats are similar; perhaps *foliosus* copes better with infertile soils.

Juncus bulbosus & *J. kochii* Bulbous Rushes

Currently *J. kochii* is not widely recognised but Peter Benoit sees it as the common type in Montgomeryshire, especially in the uplands. *J. kochii* is said to be a more robust plant, the flowers having six stamens, in which the anthers are distinctly shorter than the filaments. *Bulbosus* has three stamens (rarely six), and the anthers are about as long as the filaments. We would be grateful for records of any plants conforming to the *kochii* characters.

Laburnum spp.

Look out for *L. alpinum*, which may be present in Shropshire. It is much less hairy than *L. anagyroides* and may even be completely glabrous. The flowers are smaller: 13-17mm long not 16-20mm as in *anagyroides*, and they are borne in longer racemes. Most modern horticultural varieties are sterile hybrids between these two species.

Leontodon saxatilis Lesser Hawkbit

This was widespread in the Flora survey but there are only a few recent records. It has the forked hairs of Rough Hawkbit, *L. hispidus*, but the plant is smaller and the green flower bracts (phyllaries) and the upper part of the stems are nearly glabrous. The outermost flowers of the head are greyish-violet underneath rather than red as in *hispidus*. It grows in a similar range of species-rich grasslands to *hispidus*, on droughty and nutrient-poor soils, but it seems less confined to base-rich situations. I always look for it in grassy churchyards.

***Matricaria recutita* Scented Mayweed**

There are still quite a lot of hectads without post-Flora records of this species. Is even this arable weed disappearing?

***Malus sylvestris* Apple**

Too many people are recording these as "*sensu lato*". You can usually distinguish the true Crab *M. sylvestris* sensu stricto from *M. domestica*: the latter is quite hairy whilst the true Crab Apple has flower stalks, outsides of sepals and mature leaves all glabrous.

***Montia fontana* Blinks**

This exists in four subspecies, all of which might occur in Shropshire. I think many people now know the tiny reddish variety sometimes seen with other short-lived annuals on rock outcrops. This is ssp. *minor*. The diagnostic features are in the seeds: there is a key in Stace but by all means send me a few fruit with seeds if you come across this species.

***Myosotis secunda* Creeping Forget-me-not**

This plant of upland springs has only been recorded from 9 hectads since the Flora, a considerable reduction. Surely it is still there, so are we just not getting into the moorland country enough? Any small-flowered wetland Forget-me-not with spreading hairs on the lower parts of the stems is almost sure to be this species, but check the other characters to be sure.

***Nardus stricta* Mat-grass**

We only have post-Flora records from 11 hectads, which seems very low. The same comments apply as to Creeping Forget-me-not. No other moorland grass has unbranched flowering stems with one row of flowers down one side like this species, and even when not flowering the thick mat of shoot bases and the bristle leaves are unmistakable.

***Origanum vulgare* Marjoram**

Only two post-Flora records is incredibly low - it must be on all our limestones and some of the base-rich dolerites as well.

***Papaver* spp.**

The cornfield poppies seem less widespread than in Flora days. Are these going too?

***Parietaria judaica* Pellitory-of-the-Wall**

Another species with apparently few post-Flora records.

***Pedicularis* spp. Louseworts**

Both *sylvatica* and *palustris*, plants of heaths, moors and bogs, seem seldom recorded since the Flora. The commoner Lousewort (*Pedicularis sylvatica*) is less erect and the calyx is only slightly divided, into four lobes, which are usually only hairy on the inner surface. Marsh Lousewort, or Red-rattle (*Pedicularis palustris*) has taller, more erect stems and a clearly 2-lipped calyx which is always hairy outside, and is more confined to wet places than *sylvatica*. They can grow together.

***Persicaria maculosa* Redshank and**

***P. lapathifolia* Pale Persicaria**

Both of these weed species seem to be less recorded since the Flora. The situation is probably not helped by the change in genus from *Polygonum* to *Persicaria*, but under the more familiar English names I do not understand why both species are not in every hectad.

***Poa humilis* Spreading Meadow-grass**

This used to be called *Poa subcaerulea* and used usually to be thought of as a subspecies of *Poa pratensis*, the Smooth Meadow-grass. We are now to treat it as a species, and since it is probably quite common in Shropshire we should look out for it. I see it particularly in open, sandy hedge banks and tumble-down walls, where its habit of producing individual shoots, widely spaced, from a long underground stem usually distinguished it from *Poa pratensis*. Stace gives the diagnostic feature that the two *glumes* are almost equal, and both are usually three-veined. In *P. pratensis* one glume is much smaller than the other and is often single-veined. If you are not sure what glumes are, they are the lowest pair of structures in each *spikelet*. The spikelet is the basic unit of the inflorescence, and is found at the tip of each of the finest branches. In *Poa* they consist of a pair of glumes and above them several flowers in two rows.

In *P. pratensis* the lowest cluster of branches in the inflorescence is usually three branches or more; in *P. humilis* the lowest cluster is often of two branches as in *P. annua*. Where the leaf blade meets the leaf sheath there is usually a fringe of minute hairs (x10 lens) in *P. humilis*; this is not common in *P. pratensis*.
Poa humilis may be found by water as well as in rather bare, dry sandy places.

***Polygala* spp. Milkworts**

I suspect that many people are recording *Polygala vulgaris* Common Milkwort when they should be recording *P. serpyllifolia*, Heath Milkwort. Most people are aware that *P. serpyllifolia* usually has a few pairs of nearly opposite leaves, and if they cannot find them they name the plant *P. vulgaris*.

In my experience Common Milkwort is relatively uncommon. It does seem to need quite a base rich soil, and nearly always a dry one. *P. serpyllifolia* seems to be more widespread, on even only moderately acid soils, and from dry to very wet.

The two plants do have very distinct growth forms which I think is a useful identification feature if you cannot find any opposite or nearly opposite leaves.

In *P. vulgaris* the flowering stem grows, usually fairly upright, from a tight cluster of very short woody branches at the base; eventually there are many flowers and fruits in the inflorescence, usually 10 or more. If there are side branches just below the inflorescence they are quite short.

In *P. serpyllifolia* the flowering stem, which is more often scrambling, produces a shorter inflorescence (usually of less than 10 flowers) then a branch from close below this inflorescence grows out to produce another leafy shoot, which grows well beyond the first one before flowering. this process can be repeated, to give quite a network of branches, so that the earlier inflorescences can look like lateral branches on a straggly, zigzagging stem. In winter the whole lot dies back to the base, so there is rarely much of a woody knot of perennial branches at the base as in *P. vulgaris*.

***Polygonum aviculare* Knot-grass**

The two subspecies of Knot-grass have now been made species so we should try to distinguish between them. They both occur in Shropshire in the same kind of open, weedy habitat. *P. arenastrum*, Equal-leaved Knot-grass has the leaves on the main stems and on the lateral stems all of similar size. At least the basal third of the petals and sepals are fused together, and the fruits are 1.5-2.5mm long. *P. aviculare*, Knot-grass, has the leaves of the lateral stems much smaller than those of the main stem, the petals and sepals are fused at the base only up to one quarter of their length, and the fruits are 2.5-3.5mm long.

There are other Knot-grasses, and some may eventually be found in Shropshire. Look out for *P. patulum*, Red Knot-grass, and *P. arenarium*, Lesser Red Knot-grass, aliens with inflorescence leaves (bracts) which are longer than the flowers, and which have whitish (scarious) margins.

Polypodium interjectum

Intermediate Polypody

You should always expect this where you have a Polypody on even moderately base-rich soils or rocks. Examine ripe capsules, preferably with a x20 lens. If you can see a distinct dark-brown line around the predominantly yellow-brown capsule, this is the dark-brown *annulus* which characterises *P. vulgare*, the common Polypody.

The annulus is much less differentiated in colour in *P. interjectum*, also when the capsule burst open the "gape" is much less marked than in *P. vulgare*, where the two halves almost split asunder. If in doubt take a small bit of leaf to count the cells of the annulus under the microscope, there are 4-13 (mean 7-9) thick-walled cells in *interjectum*, 7-17 (mean 10-14) in *vulgare*. Send the specimen to us if you cannot get access to a microscope. If there seem to be hairs mixed with the capsules, and the site is distinctly calcareous, you *may* have *P. cambricum*, and DEFINITELY send us a small portion of leaf with one or two sori.

The hybrid between *vulgare* and *interjectum* may be common in Shropshire. It is intermediate between the parents and sterile, so the capsules will scarcely open at all. We would like to receive suspect material to check.

Populus nigra* ssp. *betulifolia

The native Black Poplar

This is usually recognisable from its outward- and downward- arching main branches and the large burrs on the trunk. The leaves are a different shape to those of the Hybrid Italian Poplars (see Stace) and they lack the small glands on the petiole common in the latter, but note than the fastigiate "Lombardy Poplars" also belong to the same species, *P. nigra*, and can have similar leaves. Stace has a key to the many sorts of hybrid Poplars as well.

Potamogeton Pondweeds

This perhaps too big a problem to tackle here. Chris Preston has now produced BSBI Handbook No 8 *Potamogeton* with clear keys and detailed descriptions which should prove useful.

Perhaps the commonest problems are confusion between *P. natans* and *P. polygonifolius*, the two species with broad, floating leaves, and between *P. berchtoldii* and *P. pusillus*, the two very narrow- leaved species.

P. polygonifolius, the Bog Pondweed, is usually very distinct from *P. natans* because the habitats are distinct. However *P. polygonifolius* can grow in still ponds and look very much like *P. natans*. Always look carefully for the flexible, rubbery section of the petiole just below the leaf blade in *P. natans*, which is absent in *P. polygonifolius*.

A pondweed with very narrow leaves, 1mm or less, will probably be *P. pectinatus* the Fennel Pondweed, but if there is no sheathing tubular part to the leaf below the ligule then it could be either *pusillus* or *berchtoldii*. You will have to look very carefully at the ligule, which in these species clasps the stem at the base of the leaf blade. The young ligule is a complete and entire tube in *pusillus*, but splits later. It is always split from top to bottom and the margins overlap in *berchtoldii*, even in the youngest leaf. The leaf tip is more sharply pointed in *pusillus*, and there is a vein in each leaf margin which is absent from *berchtoldii*. In *berchtoldii* there is usually a fairly distinct "lacuna" (pale band of tissue) either side of the midrib which is absent in *pusillus*. These differences do I think need a fairly good binocular dissecting microscope. Send fresh material to us in polythene bags if in doubt.

Ranunculus fluitans River Water-crowfoot & *R. penicillatus* Stream Water- crowfoot

Considerable uncertainty has arisen about the distribution of these two species in streams and rivers, so we need more definite identifications. If you can obtain some flowers with a grapple, the receptacle will be glabrous or very sparsely hairy with a few long, soft hairs in *fluitans*, and will be densely covered with bristle-like hairs in *penicillatus*. In the latter the leaves are not likely to exceed 25cm (50cm in *fluitans*).

Ranunculus ficaria ssp. *bulbilifer*

This subspecies may be commoner than our records suggest. Both have tubers on their roots, but in *bulbilifer* after the flowers have opened you will find similar tubers in the leaf axils, and very few (rarely more than 6) achenes will ripen in each flower.

Rorippa spp. Watercresses

R. microphylla and *nasturtium-aquaticum* can really only be recognised in fruit, which in common with other Crucifers are divided into two compartments longitudinally by a thin membrane - in *nasturtium-aquaticum* the fruits are quite broad in relation to length (less than 10x as long as wide), and the seeds are in two rows in each compartment. In *microphylla* the fruit is generally more than 10x as long as wide and the seeds are mostly in one row. Examine the ripe seed with a x10 lens: if you can easily count the dimples (6-10 across the widest point) you have *nasturtium- aquaticum*, if there are a very large and almost uncountable number of smaller dimples (12-20 across the seed breadth) you have *microphylla*. Also look out for and record the hybrid between these species, it produces very long inflorescences made up of aborted and deformed fruit.

Rosa Roses

At long last we have some help with roses: BSBI Handbook No 7 - Roses by G. G. Graham and A. L. Primavesi. Even so there will continue to be problems with this difficult group. I think most of us can recognise *R. arvensis* with its long-exserted column bearing the stigmas (though it seems at present under-recorded in Shropshire), and *R. pimpinellifolia* with its purple-black hips and bristly-spiny stems. The rest divide mainly into *R. canina* with glabrous or almost glabrous leaves (but also check out *Rosa caesia* with short pedicels hidden by bracts, and stigmas in a domed, hairy head), and the **downy roses** in which the leaves are shortly but densely downy on both surfaces, many of them appearing distinctly pale when seen in the hedgerow.

The difficulty is to sort out the bewildering array of "species" and hybrids which make up these downy roses. It also includes the often planted introduction *R. rugosa*, easily recognised from its huge hips and hairy stems.

Further west, in Montgomeryshire most of the downy roses seem to be *R. sherardii*. This is one of the type with rather sparse leaf glands with a resinous rather than fruity smell - "boot- polish" is one way it is described but it seems a pretty pleasant sort of boot polish to me! These are what I would call the **"true" downy roses.**

The other kind are the heavily glandular roses with a fruity (apple) odour. These are mostly *R. rubiginosa*, and allied **Sweet- briars**, which also have conspicuously *stalked* glands on the leaves compared with the *sessile* or very shortly stalked glands of the true Downy Roses. Their leaves are not quite so uniformly hairy as in *sherardii* and its allies. *Rubiginosa* is also recognisable in flower from the stiffly hairy styles (glabrous in the true Downy roses).

According to the maps of Graham and Primavesi the *rubiginosa* group seems quite rare in Shropshire, so try to avoid imagining to many apple smells, and look hard for the glandular hairs!

The key in Graham and Primavesi, together with the descriptions, should help you to sort out any downy roses and sweet-briars you find.

Blackberries

I note that NO-ONE is providing records of *Rubus* micro-species! Edees and Newton produced a very detailed account of the Brambles in 1988, published by the Ray Society, and Alan Newton has assured me that the brambles are much easier than the hawkweeds, so perhaps we should try. Do keep herbarium specimens of any you identify, however.

***Salix* Willows**

Last year I produced a punch-card key to the willows which I understand people (or at least one person!) found useful. I would provide further copies if asked.

***Scrophularia umbrosa* Green Figwort**

One of the surprises of the original Flora project was the significant distribution revealed for this species. There are however few post-Flora records. It tends to grow particularly by streams and rivers, and is most easily spotted from the relatively leafy inflorescences, the bracts being larger and more leaf-like than in either *nodosa* or *auriculata*. It has the winged stems and the wide scarious margins to the sepals of *auriculata* (=*aquatica*), but the leaves are serrate rather than crenate, and the uppermost stamen, which is a sterile *staminode* in all the Figworts, is distinctly bi-lobed.

***Stachys arvensis* Field Woundwort**

Easy enough to identify but its recorded distribution has dropped alarmingly since the Flora - we have just 10 records since 1985. Look out for this species in arable fields and set-aside.

***Symphytum* Comfrey**

There are more records for the parent species *S. officinale* than for the hybrid *S.* x *uplandicum*; this seems unlikely. In *officinale* the stem leaves are strongly decurrent, forming wings which travel down the stem for at least one internode. In x *uplandicum* the leaves are not or only slightly decurrent.

***Taraxacum* Dandelions**

This is a critical genus, but Stace gives a key to the Sections (groups of similar micro-species) and at least one, and probably two kinds are fairly easily recognisable. The small, delicate-looking Dandelions with strongly dissected leaves found in dry exposed places from limestone to heaths usually belong to section *erythrosperma*. The flower head is rarely more than 3cm across. The outer bracts of the head usually have a small thickened outgrowth just behind the tip, so that viewed from the side they can appear almost forked at the tip.

Almost all other Dandelions, and probably all in Shropshire, have flower-heads more than 3cm across and lack the "forked" tip to the outer bracts.

The other characteristic type is the fairly small Dandelion of damp or wet places in which the outermost bracts often do not spread out as in the other Dandelions. In Shropshire these do NOT appear to be members of section *Palustria*, which seems to be a group of very local fenland species in which the leaves are very narrow and practically undivided and the outer bracts have a very wide scarious margin. Shropshire marsh Dandelions seem all to belong to section *Spectabilia*, where the leaves are lobed to some extent, and the scarious margin of the bracts are very narrow. The achenes (fruits) are larger than in the typical Dandelions, 3.0-5.0mm long rather than at most 3.5 as in the other sections.

***Tilia* Limes**

We have both the Small-leaved Lime *Tilia cordata* and the Large- leaved Lime *platyphyllos* in Shropshire, but the presence of the commonly planted hybrid between them, x *vulgaris*, which is intermediate on most characters, makes diagnosis difficult. In flower the inflorescences are obliquely erect in *cordata*, and pendant in *platyphyllos* and in the common hybrid Lime. *Platyphyllos* has usually only 2-4 flowers in the cluster, there are 4-10 in the hybrid and in *cordata*.

If there are only leaves the task is more difficult: try to stick to those on normal branches rather than those on suckers, which tend to be extra large.

The leaves are mostly 3-6cm long in the Small-leaved Lime, and almost glabrous except for reddish-brown tufts in the leaf vein axils (angles between the leaf veins).

In the common hybrid Lime the leaves are mostly 6-9cm, glabrous or slightly hairy beneath and with whitish hair tufts in the vein axils.

In the Large-leaved Lime the leaves are mostly 6-12cm, distinctly pubescent beneath and sometimes above, and with whitish tufts in the vein axils.

The tertiary veins are prominent beneath in *platyphyllos* and the hybrid, not in *cordata*; the young twigs are quite hairy in *platyphyllos*, but any hairs are soon lost from the young twigs of *cordata* and the hybrid.

Tripleurospermum maritimum

Scentless Mayweed used to be called *Tripleurospermum maritimum* subspecies *inodorum*, now it is *T. inodorum*. Some people are still recording it as *T. maritimum*, which is causing some confusion. This name should be reserved for plants with succulent leaf segments and larger achenes which as far as I know are not found in Shropshire.

Ulmus Elms

Despite Dutch Elm disease these still persist in woodland and hedgerow and quite a range of species and hybrids have been recorded. *Ulmus glabra*, the Wych Elm, is probably the commonest, and has the following characteristics:
Rust-coloured hairs abundant on buds, leaf stalks not more than 3mm long, , leaves more than 7cm long (typically 11-17cm), upper surface of the leaves very rough to the touch, with more than 12 pairs of lateral veins.

Any Elm without rust-coloured hairs on the bud, with leaf stalks more than 5mm long, with leaves less than 7cm long or if longer then smooth above, and those with fewer pairs of leaf-veins than 12 should be tried against the key in Stace, who also provides some useful pictures of the leaves.

Valerianella spp. Cornsalads

Something seems to be happening in this group: *dentata*, which used to be found in cornfields, seems to be disappearing. It would therefore be a good thing if people would try to distinguish the species carefully. For this you need ripe fruits. In *dentata* the calyx persists at fruiting, and completely envelops the fruit. The calyx is minute in the other species. *Locusta*, probably the commonest species, has a flattened fruit which is about as broad as long; *carinata* has a much less flattened fruit which is much longer than broad. They are all plants of open, exposed habitats which dry out in summer, and all, especially *dentata*, are adapted to disturbance.

Veronica hederifolia Ivy-leaved Speedwell

This is a very common plant of a wide variety of bare places on rich soil from gardens and allotments to hedge banks and even very shady woodlands. It flowers very early in the Spring, and may therefore be being missed - there seem to be many gaps in the distribution which were not there before.
There are two fairly distinct subspecies which probably occur throughout: ssp. *hederifolia* has larger flowers, corolla mostly more than 6mm across, and in fruit the pedicels are up to 2-4 x as long as the calyx, which enlarges greatly in fruit. *Lucorum*, which is perhaps commoner in the shade, has smaller flowers, corolla 4-6mm across, and the fruiting pedicels are mostly 3.5-7 x as long as the calyx, which does not greatly enlarge in fruit. The anthers are blue in ssp. *hederifolia*, and white or only very pale blue in *lucorum*.

Veronica polita & *V. agrestis* Field-speedwells

These weedy speedwells are similar to *V. persica* but smaller in all their parts. The flowers are 8-12mm across in *persica* and 4-8mm in *polita* and *agrestis*. Diagnostically they lack the wide-spreading capsule lobes of *persica*.
V. polita, the Grey Field-speedwell, does actually have dull, greyish-green leaves and can be distinguished from *agrestis* by the pointed sepals and because all the petals are blue. *V. agrestis*, the Green Field-speedwell, has brighter green leaves, the sepals are blunt and the lower petal is white. Both have straight glandular hairs on the capsule, but the Grey Field-speedwell *polita* has arched or curled eglandular ones on the capsule as well.

Vicia sativa Common Vetch

All the wild and cultivated types have been reduced to subspecies in Stace, but all three could occur in Shropshire and we would like you to distinguish them if you can.

Smaller, more delicate plants, often in semi-natural situations such as dry grassy banks, are probably ssp. *nigra*, which is also recognisable from the fact that the leaflets of the upper leaves are much narrower that those of the lower leaves, and all the petals more or less the same colour, usually bright pink.

The two other varieties, which are probably always escapes from cultivation, have leaves all similar in shape, and the upright standard petal is much paler than the wings.

Ssp. *segetalis* is intermediate in size and the ripe fruits are not constricted between the seeds and are brown to black in colour.

Ssp. *sativa* , which is the rarest of the three, has the largest flowers and fruits which when ripe are yellow to brown in colour.

When checking vetches don't forget **Spring Vetch, *Vicia lathyroides***. This flowers very early in the Spring and may be completely gone by June. It grows on drought-liable sandy banks and is like a tiny version of *V. sativa*, but the leaflets lack tendrils, the flowers are always solitary, and the leaflets are in 2-4 pairs.

Viola canina Heath Dog-violet & *Viola reichenbachiana* Early Dog-violet

There are a number of records for these species in Shropshire, but the differences from the Common Dog-violet, *Viola riviniana*, are actually quite subtle. *Riviniana* and *reichenbachiana* both have a central stem bearing a rosette of leaves but the flowering stems are always side-branches. The leaves are "violet-shaped" - about as long as wide and cordate at the base - and the teeth on the stipules are hair-like. *Canina*, although almost prostrate, forms a mat of flowering stems without any recognisable non-flowering leaf rosettes, the leaves are twice as long as wide and more rounded at the base, and the teeth on the stipules are triangular. *Canina* also has a different coloured flower: blue or slate blue rather than violet, and the spur is clearly tinged with yellow. *Reichenbachiana* differs from *riviniana* in having paler flowers, but the spur is darker than the rest of the flower (paler than the rest of the flower in *riviniana*), and it is straight, pointed and not notched (curved, blunt and notched in *riviniana)*. The sepals in *riviniana* have well-developed back-appendages 2-4mm long; they are tiny in *reichenbachiana*. *Reichenbachiana* flowers up to a month earlier than *riviniana*, sometimes in March.

x *Festulolium loliaceum*

This seems to be quite a common grass hybrid where the parent species grow together. Perennial Rye-grass (*Lolium perenne*) is almost everywhere in grassland now, but the other parent, Meadow Fescue (*Festuca pratensis)* is much scarcer. It is a plant of old, usually species-rich grassland on damp or even wet soil.

You can usually pick out the hybrid when the grasses are in flower: it has an unbranched inflorescence like Rye-grass, but the spikelets tend to be extra long and stick out sideways somewhat. They also seem to be more pointed than Rye-grass spikelets. To be sure you need to check the glumes. In both grasses the spikelet consists of two opposite rows of florets. At the base the glumes are sterile sheathing boat-shaped structures. there are two in the Fescue, but in Rye-grass there is only one, and the spikelet is in the angle between this glume and the main axis of the inflorescence.

If you pull the spikelet in a hybrid away from the inflorescence axis you will find a small sterile glume on the inside as well as the larger one on the outside. This is absent in true Rye-grass.

Books & Leaflets

The following are available from the Shropshire Flora Group:

Ecological Flora of the Shropshire Region. 1985. Sinker, Packham, Trueman, Oswald, Perring & Prestwood. £15.

Rare Plants of Shropshire. 1995. Lockton, Whild, Trueman, Walker & Parker. £4.50

The Dragonflies of Shropshire. 1996. Lockton, Bellis, Cheeseborough & Whild. £5.00.

We have available several copies of the *Handlist of the Shropshire Flora.* 1957, by L.C. Lloyd & E.M. Rutter. The price is 8s.6d. but we would accept a donation of, say, £5 to the Flora Group.

The Flora of Montgomeryshire. 1995. Ian Trueman, Alan Morton & Marjorie Wainwright. £18 if collected from Shrewsbury, Wolverhampton or Oswestry - or +£3.95 for postage.

Notes on Field Recording. Short leaflet giving details of recording procedures and ways to submit records to the Shropshire Flora Group. Free to members.

A Provisional List of Habitat Indicator Species for Shropshire. 1996. Ian Trueman & Sarah Whild. A draft report suggesting the most ecologically significant habitats in the county and the plant species associated with them. Free to Flora Group members.

Diary 1996

Flora Group Field Trips

All trips are free. Just turn up ready to record. It is often advisable to call Sarah (01743 343789) beforehand to confirm.

Tuesday April 23rd	Flora Group	Beck's Field, Shrewsbury Meet at Porthill Footbridge (SJ485125) at 6.30.
Sunday May 5th	Flora Group	Pentre Hill Meet at Clun Car Park (SO299807) at 11am.
Saturday May 11th	Flora Group	Mainstone Led by Tina Teearu. Meet at 2pm at SO276877.
Sunday May 19th	Flora Group	Sodylt Wood Woodland Trust reserve Meeting at 11 am - phone for details of where to meet.
Wednesday June 5th	Flora Group	A hay meadow site - call us (01743 343789) if you want to come. Meet at 6.30pm near Telford.
Saturday June 22nd	Flora Group	Wroxeter Roman City Meet at the car park (SJ565087) at 11 am.
Wednesday July 3rd	Flora Group	SJ63. Meet in the lay-by at Tern Hill (A41 from Whitchurch - SJ635322) at 11am.
Thursday July 11th	Flora Group	Causemountain area - SJ30. Meet at Westbury pub car park (SJ357092) at 1.30pm. Pat Parker leading.
Sunday July 21st	Flora Group	Brown Moss monitoring Meet at the car park by the big pool - SJ564393 at 11 am.
Wednesday Sept. 4th	Flora Group	Recording in SO78. Call (01743 343789) for details.
Saturday Sept. 28th	Flora Group	Ledwyche Brook (SO57P) Meet at the lay-by 500m NE of Middleton Bridge along the B4364 (SO543773) at 11am.

Training Courses

These courses are included for information as they may be of interest to Flora Group members.

Weekend April 19-21st	Green Wood Trust	*Assessing Woodlands for Conservation* Phone 01952 432769 to book.
Saturday April 27th	B'ham University	*Botanical Diversity in Shropshire* Three one-day courses (continues May 11th and June 1st). Enrol at The Gateway, Shrewsbury (01743 355137).
Tuesday June 18th	Wildscan	*Grasses - Identification & Ecology* A day of studying grasses, with Sarah Whild. Phone 01743 343789 to book. £12.
Weekend August 2-4th	Field Studies Council	*A Naturalist in Shropshire* Weekend of walks and evening discussions about Shropshire's best reserves. 01473 850380 to book.
W/E August 23-25th	Field Studies Council	*A Naturalist in Shropshire* Repeat of the above.

The Shropshire Flora Group

The Flora Group is a voluntary recording group concerned with the survey and monitoring of the higher plants and vegetation of the county. The Group is associated with the Shropshire Wildlife Trust (SWT) and the Botanical Society of the British Isles (BSBI).

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Joan Brown	SO79
Julie Clarke	SJ63 & 64
John Clayfield	SO37
Ruth Dawes	SJ22
Anne Dyer	SO48
Audrey Franks	SJ63 & 64
Dr H. V. Hughes	SJ80
Jean Hooson	SJ53 & SJ54
Jane Ing	SJ32
Sylvia Kingsbury	SO38 & 39
Alex Lockton	SJ41
Tavia McLean	SJ71
Pat Parker	SJ42 & 43
Will Prestwood	SJ50
Jean Rapson	SJ61
Elizabeth Roberts	SJ23
Tina Teearu	SO28
Ian Trueman	SJ70
Gary Vergine	SO29
Chris Walker	SJ40
Sarah Whild	SJ51
Daniel Wrench	SO49

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